

## Glass Passivated Rectifiers

### FEATURES

- Glass passivated chip junction
- High current capability, Low VF
- High reliability
- High surge current capability
- Low power loss
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



R-6



### MECHANICAL DATA

**Case:** R-6

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

Base P/N with prefix "H" on packing code - AEC-Q101 qualified

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

with prefix "H" on packing code meet JESD 201 class 2 whisker test

**Weight:** 1.65 g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERSTICS (T <sub>A</sub> =25°C unless otherwise noted) |                    |           |           |           |           |           |           |            |      |
|---------------------------------------------------------------------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------|
| PARAMETER                                                                                   | SYMBOL             | 6A<br>05G | 6A<br>10G | 6A<br>20G | 6A<br>40G | 6A<br>60G | 6A<br>80G | 6A<br>100G | UNIT |
| Maximum repetitive peak reverse voltage                                                     | V <sub>RRM</sub>   | 50        | 100       | 200       | 400       | 600       | 800       | 1000       | V    |
| Maximum RMS voltage                                                                         | V <sub>RMS</sub>   | 35        | 70        | 140       | 280       | 420       | 560       | 700        | V    |
| Maximum DC blocking voltage                                                                 | V <sub>DC</sub>    | 50        | 100       | 200       | 400       | 600       | 800       | 1000       | V    |
| Maximum average forward rectified current                                                   | I <sub>F(AV)</sub> | 6         |           |           |           |           |           |            | A    |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load         | I <sub>FSM</sub>   | 250       |           |           |           |           |           |            | A    |
| Maximum instantaneous forward voltage (Note 1)<br>@ 6 A                                     | V <sub>F</sub>     | 1.1       |           | 1.0       |           |           |           | V          |      |
| Maximum reverse current @ rated VR    T <sub>J</sub> =25 °C<br>                             |                    |           |           |           |           |           |           |            |      |

Note 1: Pulse Test with PW=300μs, 1% Duty Cycle

Note 2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

| ORDERING INFORMATION |                    |              |                     |         |                        |
|----------------------|--------------------|--------------|---------------------|---------|------------------------|
| PART NO.             | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING                |
| 6A0xG<br>(Note 1)    | Prefix "H"         | A0           | Suffix "G"          | R-6     | 700 / Ammo box         |
|                      |                    | R0           |                     | R-6     | 1,000 / 13" Paper reel |
|                      |                    | B0           |                     | R-6     | 400 / Bulk packing     |

Note 1: "x" defines voltage from 50V (6A05G) to 1000V (6A100G)

| EXAMPLE       |          |                    |              |                     |                    |
|---------------|----------|--------------------|--------------|---------------------|--------------------|
| PREFERRED P/N | PART NO. | AEC-Q101 QUALIFIED | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION        |
| 6A05G A0      | 6A05G    |                    | A0           |                     |                    |
| 6A05G A0G     | 6A05G    |                    | A0           | G                   | Green compound     |
| 6A05GHA0      | 6A05G    | H                  | A0           |                     | AEC-Q101 qualified |

## RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

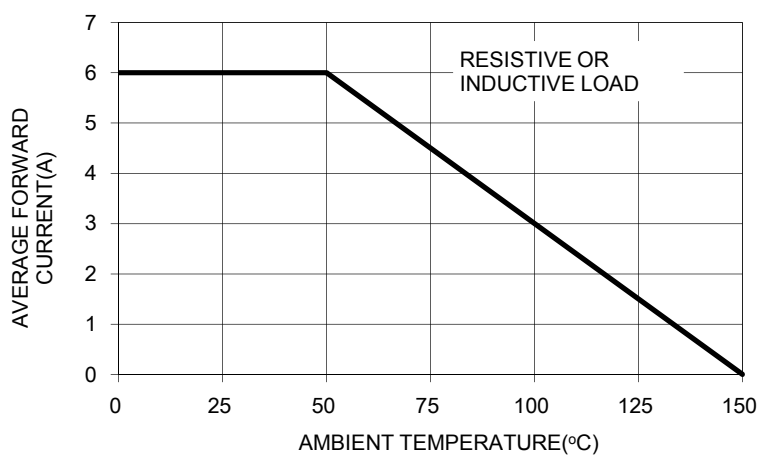


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

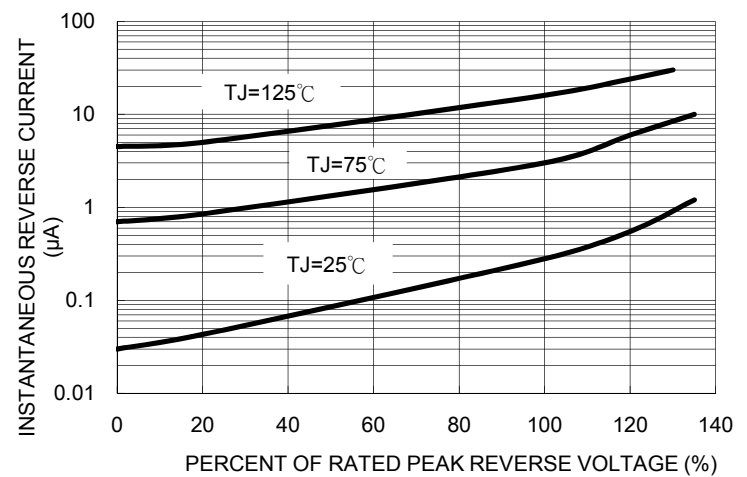


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

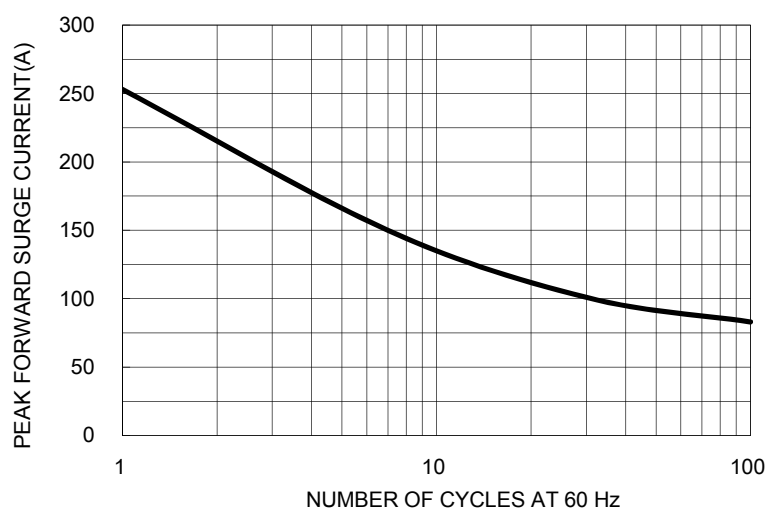


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

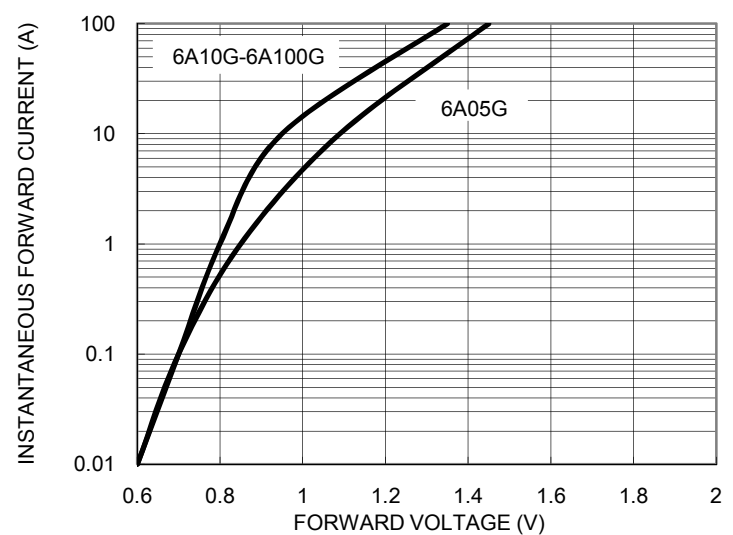
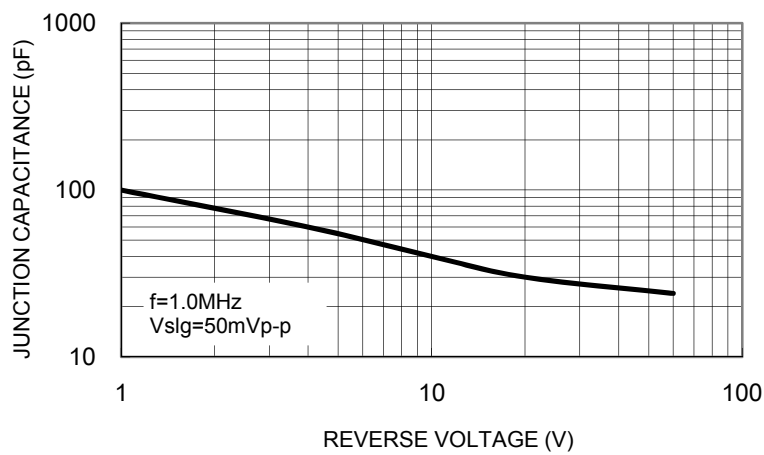
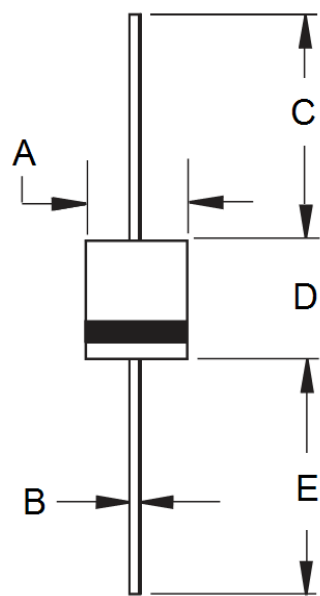


FIG. 5- TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS



| DIM. | Unit (mm) |      | Unit (inch) |       |
|------|-----------|------|-------------|-------|
|      | Min       | Max  | Min         | Max   |
| A    | 6.80      | 7.20 | 0.268       | 0.283 |
| B    | 1.20      | 1.30 | 0.047       | 0.051 |
| C    | 25.40     | -    | 1.000       | -     |
| D    | 8.60      | 9.10 | 0.339       | 0.358 |
| E    | 25.40     | -    | 1.000       | -     |

MARKING DIAGRAM



P/N = Specific Device Code  
G = Green Compound  
YWW = Date Code  
F = Factory Code

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